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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/161,584	09/28/1998	GUY NATHAN	871-52	7842

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EXAMINER	
PENDLETON, BRIAN T	
ART UNIT	**PAPER NUMBER**
2644	26

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/161,584	Applicant(s) NATHAN, GUY	
	Examiner Brian T. Pendleton	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 5-9 in paper No.25, filed 4/16/04, with respect to the rejection(s)of claim(s) 10 and 11 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view newly found prior art references.

Claim Objections

2. Claim 11 is objected to because of the following informalities: it is dependent on a canceled claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee, US Patent 5,757,936 (Lee '936) further in view of Lee, US Patent 5,554,968 (Lee '968). In figures 1, 2A, 2B, 3A and 3B, Schotz discloses a digital wireless speaker system comprising a digital transmitter 22 having a digital transmission device 62, digital modulator 103, a digital receiver 24 having a demodulator 148, serial/parallel digital converter 214, digital/analog converter 216 and inherently a loudspeaker which reads on a digital transmission

system for audio speakers, a digital transmission device including a series conversion circuit, a digital modulator which controls a transmitter, a digital receiver device, a digital demodulator, a serial/parallel digital converter, digital/analog converter and a loudspeaker for receiving the analog signals and generating sound corresponding thereto. Schotz does not disclose a digital compression device for compressing digital audio data into a compressed digital data, converting the compressed digital data into series compressed digital signal packets, transmitting the series compressed digital signal packets onto the AC power lines using one carrier frequency, a digital receiver device connected to the AC power lines for receiving the transmitted packets over the AC power lines, demodulating the series compressed digital signal packets modulated on one carrier frequency, converting the demodulated series compressed digital signals into demodulated parallel compressed digital signals, and a digital decompressor for decompressing demodulated parallel compressed signals into demodulated parallel decompressed digital signals. However, the use of AC power lines as a transmission medium for wireless speakers was well known in the art, as evidenced by Lee '936, whose invention discloses an audio signal distribution system using a processor 20, AC power outlet 20b, AC power line 24 and remote unit 26. The processor 20 contains a compressor and the remote unit 26 has a decompressor (expander). Thus, Lee '936 discloses a digital compression device, transmitting digital signals over AC power lines, receiving the digital signals by a receiver device (remote unit 26) connected to the AC power line, and a digital decompressor. It would have been obvious to one of ordinary skill in the art at the time of invention to use AC power lines, per the teaching of Lee '936, as the transmitter of the Schotz system for the purpose of eliminating antennae and not using valuable radio frequency bandwidth. The modified Schotz invention does not explicitly

disclose transmitting signal packets. Lee '968 discloses a data communication system over power lines comprising first structure 1, second structure 2, power transmission line 100 wherein the power transmission line 100 is capable of transmitting digital signal packets. It would have been obvious to one of ordinary skill in the art at the time of invention to transmit digital signal packets in the modified Schotz invention for the purpose of coding for specific digital packet destination and reduced interference. The modified Schotz apparatus would only need one carrier frequency since serial digital packets are sent. Claim 10 is met. Regarding claim 11, digital modulator 103 of Schotz uses quadrature phase shift keying and it would have been obvious to one of ordinary skill in the art at the time of invention to use phase quadrature digital modulation for the purpose of high speed digital transmission.

4. Claims 12, 13, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee '936 further in view of Lee '968 as applied to claim 11 above, and further in view of Anderson et al . The combination of Schotz, Lee '936 and Lee '968 does not teach that the series conversion circuit is operable to encode a destination address into the series compressed digital signal packets and further wherein the digital receiving device is operable to compare the destination address to an address of the receiving device in order to determine if the signal is addressed to the receiving device. Lee '968 suggested the feature of destination addresses and coding signals in the abstract. Anderson et al disclose a speaker system which uses control data transmitted with the digital audio data to select a specific speaker. It would have been obvious to one of ordinary skill in the art at the time of invention to include the teachings of Anderson et al in the invention described by the combination of Schotz, Lee '936 and Lee '968 for the purpose of increasing flexibility of the system to handle many configurations of speakers

and audio signals. As for claim 13, figure 1 of Anderson et al shows a plurality of digital inputs 15 which are connected to multiplexer 14. One of ordinary skill would have realized that the digital inputs could be different digital files each encoded with a destination address without undue experimentation since the main concept of addressing audio was already taught. Per claim 15, the "protocol" with which the audio data is serialized in the transmission device 62 was arbitrary, as any format with includes the address, audio data and begin and end markers would have sufficed. Per claim 16, control data is sent to the loudspeaker, as taught by Anderson.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee '936 further in view of Lee '968 as applied to claim 10 above, and further in view of Brugger. The combination of Schotz, Lee '936 and Lee '968 does not disclose an encryption device in the transmitter and a decryption device in the receiver of the wireless speaker system. Brugger discloses a system comprising communication network 4, encryption module 30, decryption module 32 and interpretation module 34 (decryption key). It would have been obvious to one of ordinary skill in the art at the time of invention to use encryption circuits and methods, per the teaching of Brugger, in the combination of Schotz, Lee '936 and Lee '968, for the purpose of ensuring safe transportation of data without unauthorized access.

6. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee '936 further in view of Lee '968 further in view of Anderson et al as applied to claim 16 above, and further in view of Brugger. The combination of Schotz, Lee '936, Lee '968 and Anderson et al do not disclose an encryption key as part of the "protocol". However, as discussed above, encryption keys were well known in the art at the time of invention, as evidenced by Brugger. Any auxiliary information could have been included in the transmitted

signal, as taught by Schotz column 8 lines 8-12. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include encryption keys in the subcoded information transmitted to receiving devices in the speaker system taught by the combination of Schotz, Lee '936, Lee '968 and Anderson et al for the purpose of secure audio transmission.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRIAN PENDLETON
PATENT EXAMINER

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